

Work Order ID 163188

Thursday, June 22, 2017 1:58:46 PM

163188

Page 1

Item ID: D350-748-101

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Fwd Crosstube AS350 / AS355

Stop

NS2

Start Date: 6/22/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/4/2017 Req'd Qty: 1.00

1

Customer:

Reference:

DAS

Approvals: Process Plan: **21**

Date: **JUN 22 2017**

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D350-748-141

H

DAS

6

JUL 27 2017

100

Document Control

9-89

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc Control -USB or Paperwork

Photocopy bluefile & type labels per PPPD350-748-101

CHG004

DAS

28

9-89

JUL 31 2017

110

110

CNC Bend 1

CNC Delta 100 Bender

BENDING MACHINE - CROSSTUBES

1.08

Memo

0.90

Bend tube as per Dwg D350-748-141 using CNC bender program D350F and Folio FT

****UNDER BEND .225" PER SIDE****

****USE (4) DT9824 SHIM BLOC TO CHECK STRAIGHTNESS****

****VERIFY CROSSTUBE DIMENSIONS AS PER DWG****

1 m6h 17/07/05

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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OTHER : ☐																									

Work Order ID 163188

163188

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Thursday, June 22, 2017 1:58:46 PM

Item ID: D350-748-101 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Fwd Crosstube AS350 / AS355
 Start Date: 6/22/2017 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 8/4/2017 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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128		0.00							
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128

Crosstubes

Crosstubes

Memo

1.22

CUT TUBE AT HEIGHT ON FAI SHEET

VERF HEIGHT 13.25 BY QC 15 LEVEL INSPECTOR JW

VERF TWIST 0.068" BY QC15 LEVEL INSPECTOR JW

130

130

Crosstubes

Crosstubes

Crosstubes

Memo

1.24

2- Drill Tube as per Dwg D350-748-141 Using DT8876 A,B & C Drill Jigs,
 Set-up drill table as per QSI 010

3- Deburr

4- Engrave Part # and Batch # as per Dwg D350-748-141

5- Remove all marks from tube within limits of D350-748-141

6- Apply a light coat of LPS3 on the interior of tube

Batch: _____

JW 17-07-13

GD 17-07-13
JW

DQA: _____ Date: _____

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QA Closed: _____ Date: _____

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OTHER : _____																																																															

Work Order ID 163188

Thursday, June 22, 2017 1:58:46 PM

163188

Page 4

Item ID: D350-748-101

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/4/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.02

Quality Control

CHECK 10 DEG HOLES WITH DT8876E (EUROCOPTER CLAMP)

DAS
38

9-89

JUL 13 2017

150

Outsource process-Cadplate per QSI017 4.1.9.1

0.00

150

Outsource3

Memo

360.00

Outsource process - Cad plate

Issue P/O: 37045
Stress relief at 375° for 5 hours
Magnetic Particle Inspect per ASTM E1444
Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375° for 8 hours, Chromate Treat
Possible Supplier: Southwest United Industries
Ensure Certificate of Conformity is attached

DAS
13
9-89

OAB 17/07/14

160

Receive & Inspect for Damage & Mat'l Certs

0.00

160

Packaging

Memo

0.02

Packaging

Ensure certificate of conformity is attached

1X SP17-7-25

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

Work Order ID 163188***163188***

Page 5

Thursday, June 22, 2017 1:58:46 PM

Item ID: D350-748-101

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/4/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170

QC6- All purchased or subcontracted products

0.00

170

QC

Memo

0.02

Quality Control

JUL 25 2017

174

Outsource process - NDT per QSI038 4.1

0.00

174

Outsource2

Memo

48.00

Outsource process - NDT

ISSUE P/O TO ACUREN: PO 37211

176

Receive & Inspect for Damage & Mat'l Certs

0.00

176

Packaging

Memo

0.02

Packaging

1 u 17.07.25

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

178

QC5- Inspect part completeness to step on W/O

0.00

178

QC

Memo

0.02

Quality Control

179

Pressure Wash per QSI005 4.3

0.00

179

HandFinish

Memo

0.00

Hand Finishing

DAS
41

JUL 25 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Misidentified ☐	Past Due ☐																																																																

Work Order ID 163188

Thursday, June 22, 2017 1:58:46 PM

163188

Page 7

Item ID: D350-748-101

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/4/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Spray Painting per QSI005 4.2	0.00							DAS
180	SprayPaint					1			41
Spray Painting	Memo	1.49							9-89
	***VERIFY BY <u>DAS</u> BATCH # TO MATCH W/O <u>163188</u> <u>41</u>								JUL 25 2017
	***VERIFY BY <u>9-89</u> PART # TO MATCH W/O <u>163188</u>								
	MASK SCRIBE B# & P# AND VERIFY								
	1-Prime inside and out crosstube as per QSI 005 4.2 BATCH: <u>136887</u>								
	2-Paint Outside of Tube as per Dart QSI 005 4.2 BATCH: <u>137852</u>								
190	QC14- Inspect Spray Paint	0.00							
190	QC								9B
Quality Control	Memo	0.01							17-07-31
	Then, Wrap in plastic bag to protect from scratches								
	***VERIFY BY <u>9B</u> BATCH # TO MATCH W/O <u>163188</u>								
	***VERIFY BY <u>9B</u> PART # TO MATCH W/O <u>163188</u>								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 163188

163188

Page 8

Thursday, June 22, 2017 1:58:46 PM

Item ID: D350-748-101

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/4/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

0.00

200

Crosstubes

Crosstubes

Crosstubes

Memo

2.44

INSTALL GROUND WIRE INSERT, THEN INSERT SCREW AND WASHER

1-Abrade mating surfaces of support and crosstube with 180 grit sandpaper,
clean the area with MEK or equivalent as per dwg

2-Install supports with Proseal 890 per D350-748-141 and QSI 015

A/R Proseal 890 Batch: 137495
EXP: 1/183-Install supports clamps Using Dt8876 as per Dwg D350-748-141, Torque to
60-80 IN-LBS.

PROSEAL CURE TIME 72 HOURS:

Start: 17-7-26Finish: 17-7-29***RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS CURED
FOR 72HOURS AS PER DWG.***DAS
41

JUL 26 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work-Order ID 163188***163188***

Page 9

Thursday, June 22, 2017 1:58:46 PM

Item ID: D350-748-101

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/4/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00

210

QC

Quality Control

Memo

0.02

***RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS CURED
FOR 72HOURS AS PER DWG.******VERIFY BY JB

BATCH # TO MATCH W/O

***VERIFY BY JB

PART # TO MATCH

W/O 16318817-07-31

220

Pick Kit

0.00

220

Packaging

Packaging

Memo

0.00

JUL 27 2017

DAS
6
9-89

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date : _____		Step #: _____			QTY Effective : _____				MRB (QSI042) Approval		
Description Work Order Deviation					Disposition					Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐					FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐						
					OTHER : ☐						

Work Order ID 163188

Thursday, June 22, 2017 1:58:46 PM

163188

Page 10

Item ID: D350-748-101

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop ***NS2***

Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/4/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

230

QC4- 100% Inspect kits for completeness

0.00

230

QC

Quality Control

Memo

VERIFY BY _____ **DAS 28 9-89** BATCH # TO MATCH W/OVERIFY BY _____ **DAS 28 9-89** PART # TO MATCH W/O**DAS 28 9-89****JUL 3 1 2017**

240

Identify as per dwg & Stock Location: _____ 0.00

240

Packaging

Packaging

Packaging

Memo

Identify and pack for shipping as per PPP D350-748-101
Location:FG035 *fold*

0.00

DAS 28 9-89**JUL 3 1 2017**

250

QC21- Final Inspection - Work Order Release 0.00

250

QC

Quality Control

Memo

0.10

DAS 21 9-89**JUL 3 1 2017****DAS 21 9-89****JUL 3 1 2017**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, June 22, 2017 1:58:51-PM

Page 1

Work Order ID: 163188

163188

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017

Required Date: 8/4/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 06-07-05 JLM
IPP Rev:B Update qty of MS21042L5 06-09-12 KJ VERIFY
BY:DD
IPP Rev:C Rev B 07-11-15 DD
IPP Rev D Combined manufacturing 08.04.02 EC verified by: DD
IPP Rev:E 08-06-24 revD as per dwg DD verified by:EC IPP Rev:F
10.08.04 added QSI010 4.3 DD verf:EC
IPP REV:G ADD UNDER BEND COMMENT 12-05-28 JLM IPP
REV:H 12.11.05 as per dwg D350-748-141G DD verf:JLM IPP REV:I
15.03.19 as per dwg D350-748-141revH dd verf:jlm

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D350-748-141TRN

Manufactured

No

110

Each

6.0000

1

1

D350-748-141TRN

**

Crosstube Turning Detail

MGG 17/07/05

Location

Loc Qty

Loc Code

HALL

6

130790

0

158695

1

158696

1

158697

1

158698

1

158699

1

158718

1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Thursday, June 22, 2017 1:58:51 PM

Work Order ID: 163188

163188

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017

Required Date: 8/4/2017

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

AELS8-1032-225

Purchased

No

200

Each

2,629.000

1

1

AI S4-1032-225

Rivnut

**

DAS

41

JUL 30 2017

9-89

Location

Loc Qty

Loc Code

FG

25

M134975

20

M135998

5

FP001

2204

M135603

40

M135920

38

M135998

2115

M136265

11

ST556

400

M136579

400

1

MS21920-20

Purchased

No

200

Each

172.0000

2

2

MS21920-20

Clamp

**

DAS

41

9-89 JUL 27 2017

Location

Loc Qty

Loc Code

FG

2

1 1 122254

2

LG050

168

m137361

43

m137587

50

m137710

50

2

m137820

25

LG056

2

m128650

1

m132675

1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐							
Misidentified ☐	Past Due ☐								

Picklist Print

Thursday, June 22, 2017 1:58:51 PM

Work Order ID: 163188

163188

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017

Required Date: 8/4/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

200

Each

265.0000

1

1

MS27039-1-10

SCREW

**

DAS

41

9-89

JUL 27 2017

Location

Loc Qty

Loc Code

GA

15

m129541

15

over006

150

m137736

150

ST280

100

m137164

10

m137597

90

D5123-7

Manufactured

No

200

Each

114.0000

2

2

D5123-7

Clamp Cushion

**

DAS

41

9-89

JUL 27 2017

Location

Loc Qty

Loc Code

LG052

114

151551

22

153236

92

D3502-1

Manufactured

No

200

Each

68.0000

2

2

D3502-1

Support

**

DAS

41

9-89

JUL 27 2017

Location

Loc Qty

Loc Code

LG052

68

150010

14

150683

12

158881

20

161764

22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

Picklist Print

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Page 4

Work Order ID: 163188

163188

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017

Required Date: 8/4/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0363J

Purchased

No

200

Each

722.0000

1

1

NAS1149D0363.J

Washer

**

DAS

41

9-89

~~JUL 27 2017~~ JUL 27 2017

Location

Loc Qty

Loc Code

GA

43

m134055

13

m137164

30

ST263

679

m137587

679

AN4-6A

Purchased

No

220

Each

653.0000

16

16

AN4-6A

BOLT

**

DAS

6

9-89

DAS

38

9-89

JUL 27 2017

Location

Loc Qty

Loc Code

ST345

653

M137320

53

M137464

600

D3500-1

Manufactured

No

220

Each

64.0000

4

4

D3500-1

Saddle

**

DAS

6

9-89

DAS

38

9-89

JUL 27 2017

Location

Loc Qty

Loc Code

ST406

64

151743

4

152839

20

158741

40

DAS
28
9-89

161707

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Page 5

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Work Order ID: 163188

163188

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017

Required Date: 8/4/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0463J

Purchased

No

220

Each

3,761.000

32

32

NAS1149D0463J

**

Washer

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

40

M135056

40

ST260a

2000

M137699

2000

ST263

1721

M137371

1721

JUL 27 2017

DAS
6
9-89

DAS
38
9-89

AN5-32A

Purchased

No

220

Each

266.0000

4

4

AN5-32A

**

Bolt

DAS
28
9-89

Location

Loc Qty

Loc Code

over004

240

m137464

120

m137853

120

ST336

26

m137320

26

JUL 27 2017

DAS
6
9-89

DAS
38
9-89

AN4-41A

Purchased

No

220

Each

288.0000

8

8

AN4-41A

**

Bolt

DAS
28
9-89

Location

Loc Qty

Loc Code

over003

241

m136851

40

m137320

40

m137464

41

m137544

120

ST342

47

m133769

7

m135978

40

JUL 27 2017

DAS
6
9-89

DAS
38
9-89

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Page 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____																			

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Work Order ID: 163188

163188

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017

Required Date: 8/4/2017

Start Qty: 1.00

Required Qty: 1.00

D3501-1 Manufactured No

220 Each 475.0000 16 16

D3501-1

Bushing

**

JUL 27 2017

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST037

157

159311

157

ST038A

318

152871

0

161783

120

162915

198

10

MS21042L5 Purchased No

220 Each 603.0000 4 4

MS21042L5

Nut

**

JUL 27 2017

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

12

m127813

12

ST303

591

m137478

91

m137587

500

4

MS21042L4 Purchased No

220 Each 2,225.000 24 24

MS21042L4

Nut

**

JUL 27 2017

DAS
6
9-89 DAS
38
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

10

m133363

10

GA

51

m135058

51

OVER007

1400

m137402

400

m137680

1000

24

ST303

764

m137544

764

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coor. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐																						
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Large Fab ☐	Composite ☐	Supplier ☐																							
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition			Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐				Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐															
		OTHER : _____																							

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Work Order ID: 163188

163188

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

Start Date: 6/22/2017

Required Date: 8/4/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0563J

Purchased

No

220

Each

1,679.000

8

8

NAS1149D0563.J

Washer

DAS

6

9-89

JUL 27 2017

DAS

38

9-89

Location

Loc Qty

Loc Code

GA

108

m135774

108

ST260a

700

m137820

700

ST263

871

m137587

871

DAS
28
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

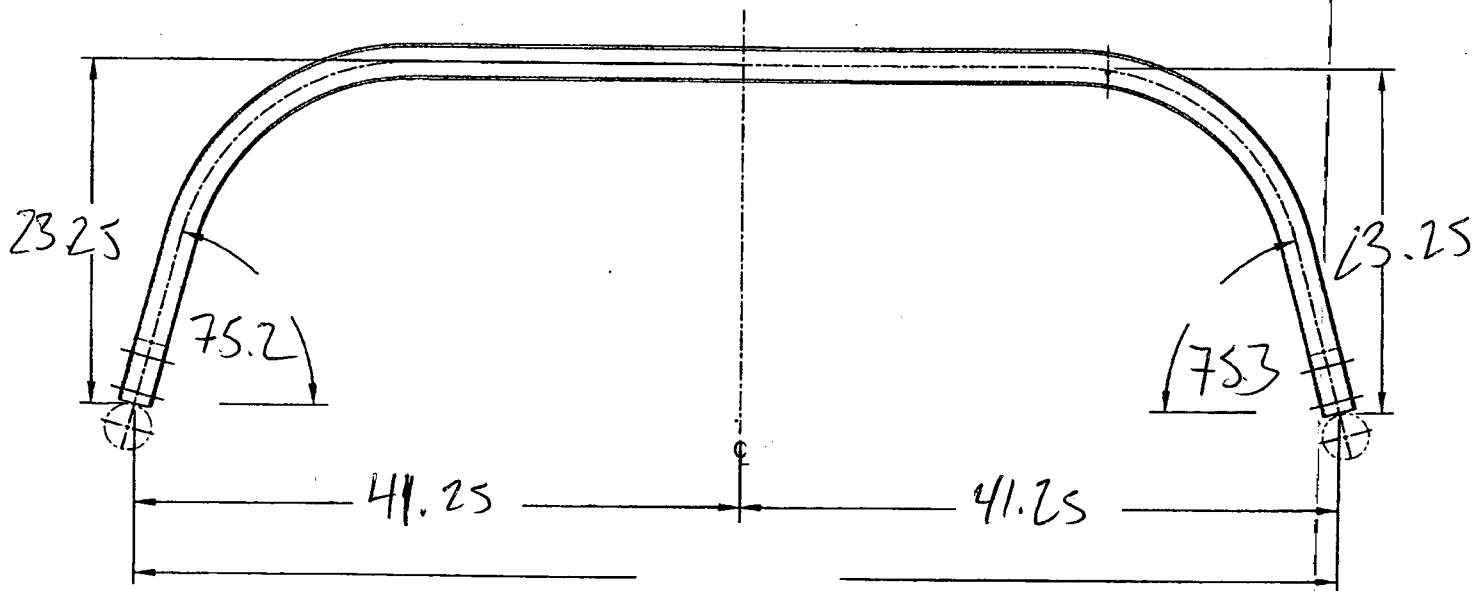
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																														
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Large Fab ☐	Composite ☐	Supplier ☐																																																																
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																														
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				Completed By																																																														
				Lead hand / Supervisor Approval Verification																																																														
				QC / QA Coordinator Approval																																																														
<table style="width:100%; border: none;"> <tr> <td colspan="2" style="text-align: center;">Root Cause</td> <td colspan="3" style="text-align: center;">FAULT CATEGORY</td> </tr> <tr> <td style="width:15%;">Environment ☐</td> <td style="width:15%;">No Re-verification ☐</td> <td style="width:15%;">Pressure/Forced ☐</td> <td style="width:15%;">Temperature/Cure ☐</td> <td style="width:15%;">Power Loss/Surge ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☐</td> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Off-set ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> <td colspan="3" rowspan="2" style="vertical-align: top;">OTHER : _____</td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> </tr> </table>					Root Cause		FAULT CATEGORY			Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			Misidentified ☐	Past Due ☐
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Before Ac-stress

DART AEROSPACE LTD		Work Order:	163188
Description: Crosstube High Fwd (AS350/355)		Part Number:	D350-748-101
Inspection Dwg: D350-748-141	Rev: H	Page 1 of 1	

Required Dimension	Min	Max
Height	23.00	23.50
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.55	82.05
Bending Passes	7	--
Crushing	--	8%
Twist	--	0.38



	Side A	Side B
Bending Passes	36	36
Crushing		
Comments		

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	
C	11.11.07	Dwg Rev updated	KJ	
D	12.04.16	Added bending, crushing & twist dimensions	KJ	
E	13.02.27	Dwg Rev updated	KJ	
F	14.02.13	Crushing & twist dimensions revised	KJ	
G	14.11.10	Height dimension revised	KJ	
H	15.04.14	Dwg Rev updated	KJ	
I	15.09.09	Crushing dimension revised	KJ	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval			
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
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Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								

Item	Qty	Part Number	Description
	-141		
1	X	D350-748-141	CROSSTUBE ASSEMBLY (AS 350/355 HI FWD)
2	1	D6015-125	CROSSTUBE (OR D6017-115)
3	2	D3502-1	SUPPORT
4	2	D5123-7	CLAMP CUSHION
5	1	AELS-1032-225	INSERT
6	1	NAS1149D0363J	WASHER (OR AN960JD10)
7	2	MS21920-20	CLAMP (OR MS21920-21/-22, PER DART SPEC. M-MS21920-20/-21/-22)
8	1	MS27039-1-10	SCREW
9	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

GENERAL NOTES:

- MATERIAL: MANUFACTURED FROM D6015-125 OR D6017-115
FINISHED LENGTH AFTER TURNING = 112.270±0.06 (AFTER BENDING/TRIMMING = 110.27 REF)
- FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- TOLERANCE: PER DART QSI 018 UNLESS OTHERWISE NOTED.
WALL THICKNESS ECCENTRICITY PER DART QSI 038 7.2
MIN. ALLOWABLE WALL IS -0.020 FROM NOMINAL
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: DART PART NUMBER "D350-748-141" AND BATCH NUMBER ON INSIDE OF CUFF
PER DART QSI 044 6.4 (VIBRATING STYLUS)
- WEIGHT: 30.45 lbs
- PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.
- EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.

TURNING

- BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- HEAT TREAT TO MIN. 180 KSI PER MIL-T-8736 OR AMS2759/1E AFTER TURNING. ACCEPTABLE TO VERIFY TENSILE STRENGTH BY HARDNESS TEST PER ASTM E18 TO 40-45 HRC.

BENDING

- ALL DIMENSIONS FOR BENT TUBE ARE POST STRESS RELIEF
- BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES PER SIDE. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D. ON TOP HALF OF BEND, AND 8% ON BOTTOM HALF OF BEND.
- MAX AMPLITUDE OF RIBBLING ALONG BENT PORTION OF THE TUBE IS 0.030 (ZN A1-3)
- AFTER BENDING, STRESS RELIEVE TUBE AT 650°F ±0.25°F FOR A MINIMUM OF 2 HRS AND ALLOW TO COOL TO AMBIENT TEMPERATURE (REF AMS2759/1E).
- MAX TWIST AFTER STRESS RELIEF: WITH TUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.38 (ZN C1-3).

ASSEMBLY

- TO INSTALL D3502-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.02" TO 0.05" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

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WITHOUT NOTICE
WORK ORDER

NO. 163188 MLS

170622

RELEASED

2015 MAR 18

4 EN15-597

H	D5123-7 WAS D3595-063-395, MS21920-20 WAS -22, ALLOWABLE CRUSHING NOW 8% WAS 7%	CP	15.02.25
G	RMV ABRASION STRIP, SUPPORT NOW W/ PROSEAL & CUSHION, ADD STRESS RELIEF, LONGER CUFF, NOW TRIM'D AFTER BEND, ADD WALL DIMS & UPDATE TOL	CP	12.08.12
F	ADD HRC TEST OPTION (B8-1) PER PAR 08-040, ADD TWIST LIMIT (A8-1, C1-3), ADD D6015-125 OPTION (C8-1), STOCK DIM NOW MACHINED (D1-4)	CP	10.11.23
E	REVISE GENERAL NOTES; UPDATE TO CURRENT ADD STANDARDS; RELOCATED FLAG #8 PER PAR 08-046 (ZN A6-3); TOLERANCES (ZN C6-3, D1-3)	RF	09.09.30
D	MAG. PARTICLE AND CAD PLATE AS MFD.	CP	06.10.31
C	ADD CAD PLATING	CP	06.08.14
B	ADD D6017-115 & PRIME AND PAINT	CP	06.06.30
A	NEW ISSUE	CP	06.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED	AS		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	15.02.25		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. REV. H
D350-748-141 SHEET 1 OF 4
TITLE SCALE
CROSSTUBE (AS 350/355 HI FWD) NTS

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

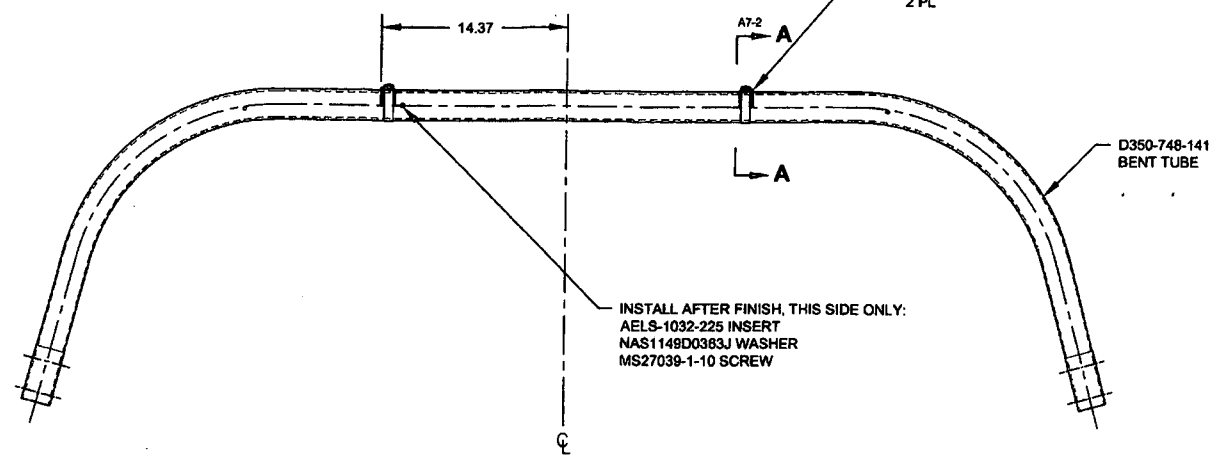
QA Closed: _____ Date: _____

Work Order update only ☐

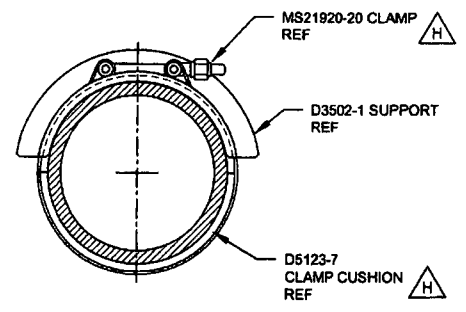
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Description Work Order Deviation					Disposition					Completed By	
										Lead hand / Supervisor Approval Verification	
										QC / QA Coordinator Approval	
Root Cause					FAULT CATEGORY						
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Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : ☐								
Misidentified ☐	☐	Past Due ☐									

8 7 6 5 4 3 2 1

17 18
D3502-1 SUPPORT
MS21920-20 CLAMP (OR -21/-22) 
D5123-7 CLAMP CUSHION
2 PL



D350-748-141
ASSEMBLY DETAIL



SECTION A-A D4-2
SCALE 6X

RELEASED
2015 MAR 18 *q*

DESIGN	<i>q</i>	DART AEROSPACE LTD	
DRAWN	<i>q</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>ASS</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>q</i>	D350-748-141	SHEET 2 OF 4
APPROVED	<i>q</i>	TITLE	SCALE
DE APPR.	<i>q</i>	CROSSTUBE (AS 350/355 HI FWD)	NTS
DATE	15.02.25	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
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8 7 6 5 4 3 2 1

DQA: _____ Date: _____

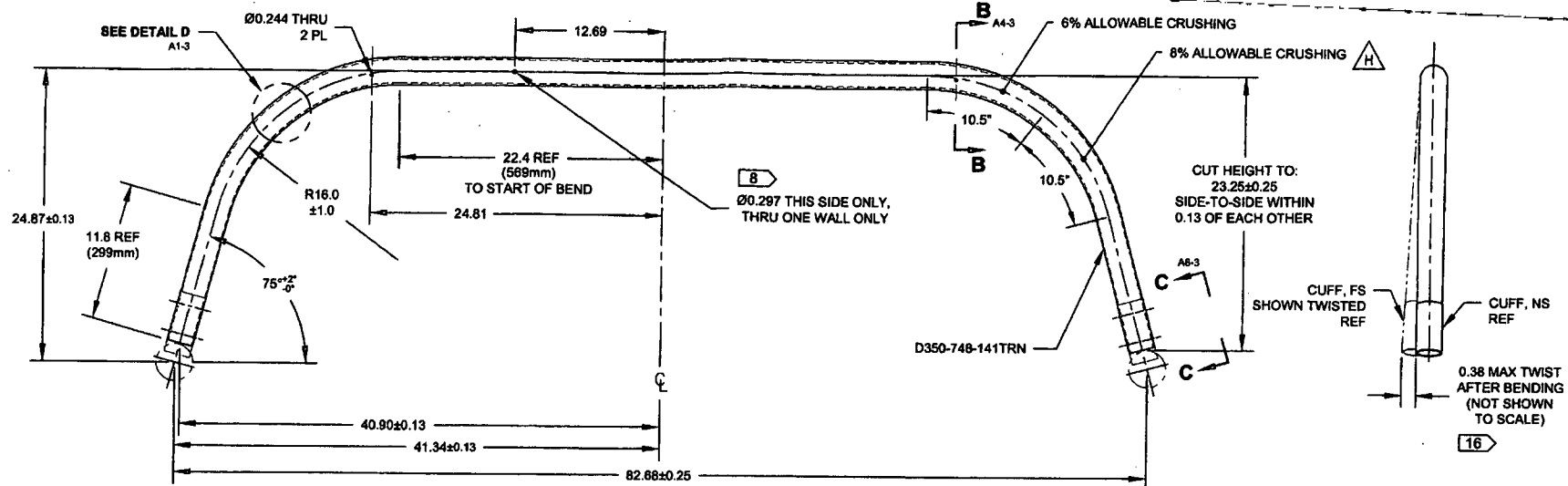


WORK ORDER NON-CONFORMANCE / UPDATE

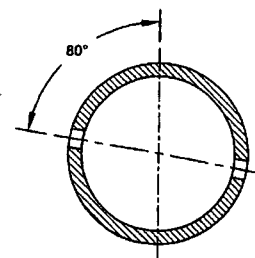
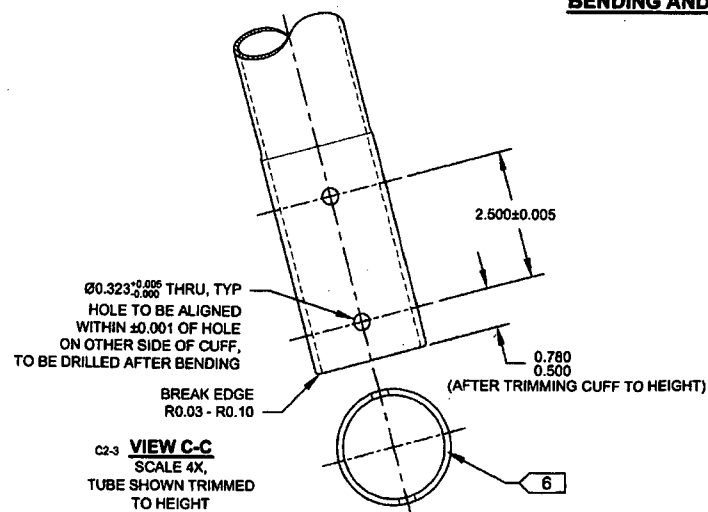
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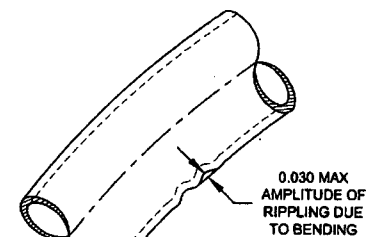
D350-748-141
BENDING AND DRILLING DETAIL 13



SECTION B-B D3-3
SCALE 8X

RELEASED

2015 MAR 18



DETAIL D D7-3
SCALE 4X
RIPPLING EXAGGERATED

DESIGN	<i>JP</i>	DART AEROSPACE LTD	
DRAWN	<i>JP</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>AS</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>AS</i>	D350-748-141	SHEET 3 OF 4
APPROVED	<i>AS</i>	TITLE	SCALE
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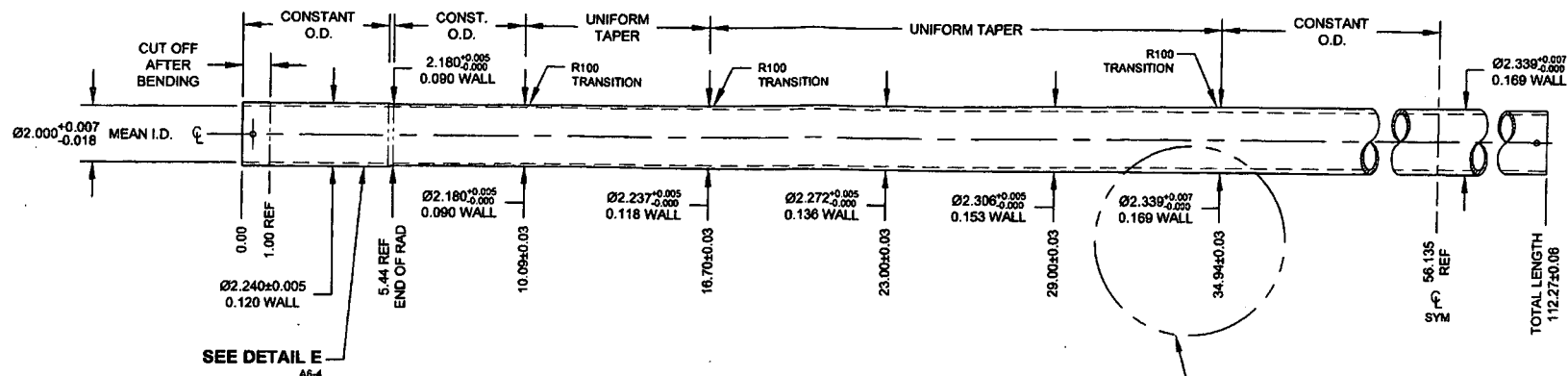


WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

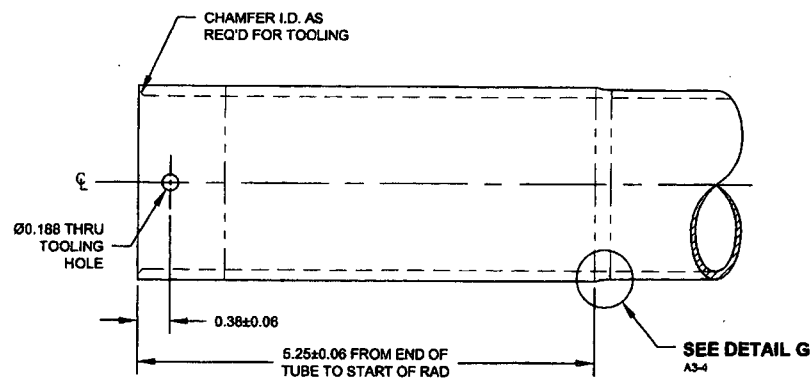
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			OTHER : ☐																	



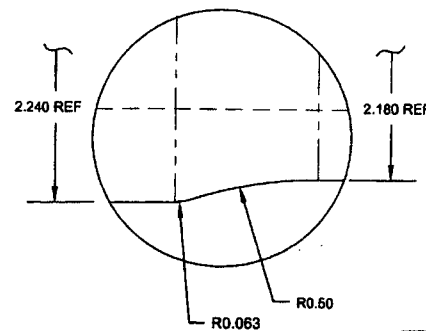
**D350-748-141TRN
TURNING DETAIL**

RELEASED

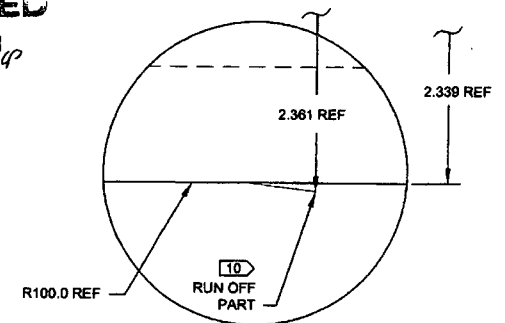
2015 MAR 18



**DETAIL E:
CROSSTUBE CUFF** C7-4
SCALE 3X



**DETAIL G:
CUFF TRANSITION** A5-4
NOT TO SCALE



**DETAIL F:
TOOL RUN-OFF** C3-4
NOT TO SCALE

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	ASS	DRAWING NO.	REV. H
MFG. APPR.		D350-748-141	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE (AS 350/355 HI FWD)	NTS
DATE	15.02.25	COPYRIGHT © 2006 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36937**

Purchase Order Date 7/5/2017

PO Print Date 7/5/2017

Page Number 1 of 2

Order From :
METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

VC-MET004

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 450 473 1884

Ship To Contact
Ship To Phone
Ship Via: Dart Truck
Ship Acct:

Buyer
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	163187	D350-748-101 CROSSTUBE	7/6/2017 Yes 7/6/2017 HEAT TREAT CROSSTUBE AS PER QSI 010 4.3 WITHIN 12HOURS AFTER BENDING		1.00	\$250.00	\$250.00
						Line Total:	\$250.00
2	163188	D350-748-101 CROSSTUBE	7/6/2017 Yes 7/6/2017 HEAT TREAT CROSSTUBE AS PER QSI 010 4.3 WITHIN 12HOURS AFTER BENDING		1.00	\$250.00	\$250.00
						Line Total:	\$250.00
3	163663	D350-748-101 CROSSTUBE	7/6/2017 Yes 7/6/2017 HEAT TREAT CROSSTUBE AS PER QSI 010 4.3 WITHIN 12HOURS AFTER BENDING		1.00	\$250.00	\$250.00

Note:

7/5/2017

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
320367	1	120684

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À /Shipped To

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No.	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
36937		Steel	2017/7/5	client

QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
----------------------	-------------------------	--------------------------------	---	-----------------

4 D350-748-101

CROSSTUBE

(1) D350-748-101 163187

(1) D350-748-101 163188

(1) D350-748-101 163663

(1) D350-748-101 163664

1 NIL

124,

SP17-7-6

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
NIL	1	

CERTIFICAT

EMPAQUETAGE Packing	
------------------------	--

QUANTITÉ EXPÉDIÉE / Quantity Shipped :

4

POIDS EXPÉDIÉ / Weight Shipped :

124,00

QUANTITÉ RESTANTE / Quantity Remaining :

0

POIDS RESTANT / Weight Remaining :

0,00

CERTIFICAT

QUANTITÉ EXPÉDIÉE / Quantity Shipped :

4

POIDS EXPÉDIÉ / Weight Shipped :

124,00

Signature:

Date:

EXPÉDIÉ LE / Shipped On : 2017/07/06

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité

Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
320367	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
36937	N/A	Steel		

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

STRESS REL

SAE AMS 2759/1 REV.E

EXIGENCE / requirement SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed RÉSULTATS DE TESTS / results

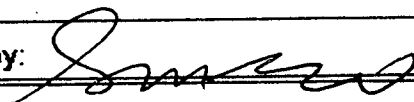
Visual

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
4	124	D350-748-101 CROSSTUBE (1) D350-748-101 163187 (1) D350-748-101 163188 (1) D350-748-101 163663 (1) D350-748-101 163664 1 NIL

SP 17-7-6
G. J. 1012

COMMENTAIRES / comments

APPROUVÉ par / Approved by:



DATE: 2017-07-06

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
320367	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
36937	N/A	Steel		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
STRESS REL				
SAE AMS 2759/1 REV.E				
EXIGENCE / requirement SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed RÉSULTATS DE TESTS / results				
Visual				
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
4	124	D350-748-101 CROSSTUBE (1) D350-748-101 163187 (1) D350-748-101 163188 ✓ (1) D350-748-101 163663 (1) D350-748-101 163664 1 NIL		

COMMENTAIRES / comments

STRESS RELIEF 650F, 2 HRS

Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec AMS2759 et AMS 2750. Le TT a été fait tel que requis par AMS2759 et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec AMS2759 et le bon de commande et le matériel rencontre les exigences spécifiées.

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Heat treatment (HT) was performed with equipment that meets the requirements of AMS2759 & AMS2750. All HT operations were in compliance with AMS2759 and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with AMS2759 and the purchase order and was found to meet the requirements.

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METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
320367	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

export or re-export is prohibited.

APPROUVÉ par / Approved by:

Isabel Otero

Isabel Otero

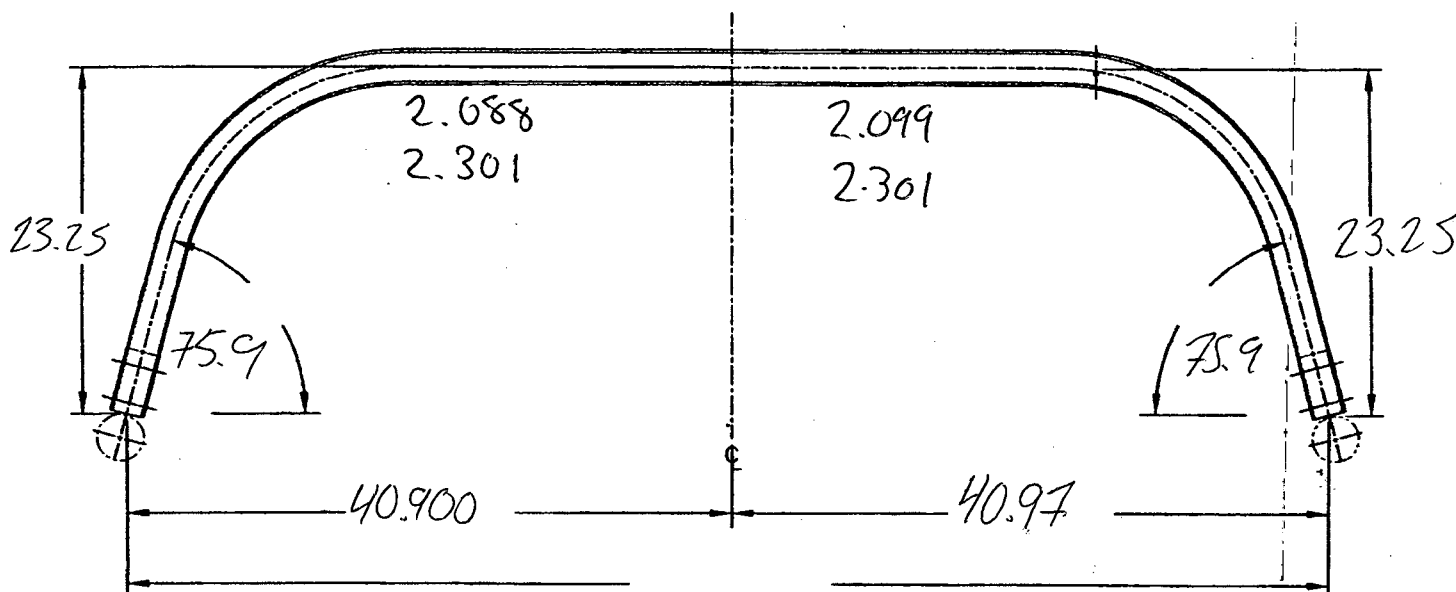
QA Technician



DATE: 2017-07-06

DART AEROSPACE LTD	Work Order: 165288	
Description: Crosstube High Fwd (AS350/355)	Part Number: D350-748-101	
Inspection Dwg: D350-748-141 Rev: H		Page 1 of 1

Required Dimension	Min	Max
Height	23.00	23.50
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.55	82.05
Bending Passes	7	--
Crushing	--	8%
Twist	--	0.38



	Side A	Side B
Bending Passes	36 4.94%	36 4.6%
Crushing		
Comments		

DAS

38

9-29

QC15 Inspection	JUL 11 2017
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	
C	11.11.07	Dwg Rev updated	KJ	
D	12.04.16	Added bending, crushing & twist dimensions	KJ	
E	13.02.27	Dwg Rev updated	KJ	
F	14.02.13	Crushing & twist dimensions revised	KJ	
G	14.11.10	Height dimension revised	KJ	
H	15.04.14	Dwg Rev updated	KJ	
I	15.09.09	Crushing dimension revised	KJ	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO37045**

Purchase Order Date 7/13/2017

PO Print Date 7/20/2017

Page Number 8 of 9

Order From :

VC-CAD002

Ship To : DART AEROSPACE LTD

CADORATH COATING
2150 LOGAN AVE.
WINNIPEG, MB R2R 0J2
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

204 633 9420

Ship To Contact

Ship To Phone

Ship Via:

Journey Freight collect

Ship Acct:

Buyer

Diane Baker

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

15	163665	D350-748-101 Fwd Crosstube AS350 / AS355	7/24/2017	1.00	\$803.42	\$803.42
			Yes			
			7/24/2017			

Stress relief at 375degree for 5hrs
Magnetic Particle Inspect per ASTM E1444
Cad Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375 degree for 8 hrs, Chromate Treat
C of C req'd

Line Total: \$803.42

16	163188	D350-748-101 Fwd Crosstube AS350 / AS355	7/24/2017	1.00	\$803.42	\$803.42
			Yes			
			7/24/2017			

Stress relief at 375degree for 5hrs
Magnetic Particle Inspect per ASTM E1444
Cad Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375 degree for 8 hrs, Chromate Treat
C of C req'd

Line Total: \$803.42

Note:

7/20/2017

Packing Slip

Page 1 of 2

Sold To:

Dart Aerospace Ltd.
1270 Aberdeen St.

Hawksbury, ON K6A 1K7

ShipTo:

CADORATH
COATING

Cadorath Coating

2150 Logan Avenue, Winnipeg, Manitoba R2R-0J2

Phone: (204) 633-9420 Fax: (204) 633-8033

INVOICE NUMBER:

S90743

Net 2% Interest Per Month charged on Overdue Accounts.

Any claims for shortages, overcharges, or damaged goods must be made within seven (7) days from receipt of goods.

Customer Order #:

37045

Date Received:

Jul-18-2017

Terms:

NET 30 DAYS

G.S.T. #:

10071 6547 RT0001

Ship Via:

Ship Date:

Jul-24-2017

Item # Qty P/N & Description

1	1 EA	CROSSTUBE	S/N 163664
		P/N d350-748-101	W/O 172796
2	1 EA	CROSSTUBE	S/N 163663
		P/N d350-748-101	W/O 172797
3	1 EA	CROSSTUBE	S/N 163660
		P/N D350-748-201	W/O 172803
4	1 EA	CROSSTUBE	S/N 163184
		P/N d350-748-101	W/O 172790
5	1 EA	CROSSTUBE	S/N 163185
		P/N d350-748-101	W/O 172791
6	1 EA	CROSSTUBE	S/N 163183
		P/N d350-748-101	W/O 172792
7	1 EA	CROSSTUBE	S/N 163186
		P/N d350-748-101	W/O 172793
8	1 EA	CROSSTUBE	S/N 163665
		P/N d350-748-101	W/O 172794
9	1 EA	CROSSTUBE	S/N 163188
		P/N d350-748-101	W/O 172795
10	1 EA	CROSSTUBE	S/N 161645
		P/N D350-748-201	W/O 172798
11	1 EA	CROSSTUBE	S/N 161647
		P/N D350-748-201	W/O 172799
12	1 EA	CROSSTUBE	S/N 163180
		P/N D350-748-201	W/O 172800

SP/7-7-25

**CERTIFICATE OF
CONFORMANCE**

**CADORATH PLATING CO. LTD.
2150 LOGAN AVENUE
WINNIPEG, MANITOBA R2J-0J1**

DATE: Jul-24-2017

CONSIGNED TO: Dart Aerospace Ltd.
1270 Aberdeen St.
Hawksbury, ON K6A 1K7

W/O #: 172795

INVOICE #: 90743

**CONTRACT OR
PURCHASE ORDER # 37045**

DESCRIPTION: CROSSTUBE

QTY 1

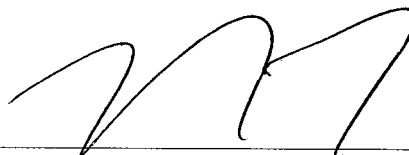
P/N # d350-748-101

S/N # 163188

STRESS RELIEF BAKE HEAT CHART # 17-631. MPI IAW ASTM-E-1444. CADMIUM PLATE IAW AMS-QQ-P-416C TYPE 2 YELLOW CLASS 1. FINAL MPI IAW ASTM-E-1444. EMBRITTLE RELIEF BAKE HEAT CHART # 17-647.

CERTIFICATE: I certify that the items indicated here on have been inspected and tested and conform to all specifications and requirements detailed on the contract or purchase order.

Approved Inspector:





skyservice Work Order Traveler

Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO32771	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: WILL FOLLOW
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:

CARRY OUT NDT INSPECTION (LIQUID PENETRANT) ON 13 CROSSTUBES

ITEM ID: D350-748-201 AFT CROSSTUBE AS350 / AS355 (QTY7)

- 1 - WORK ORDER ID#: 161645
- 2 - WORK ORDER ID#: 161647
- 3 - WORK ORDER ID#: 163658
- 4 - WORK ORDER ID#: 163661
- 5 - WORK ORDER ID#: 163662
- 6 - WORK ORDER ID#: 163180
- 7 - WORK ORDER ID#: 163182

ITEM ID: D350-748-101 FWD CROSSTUBE AS350 / AS355 (QTY6)

- 8 - WORK ORDER ID#: 163665
- 9 - WORK ORDER ID#: 163183
- 10 - WORK ORDER ID#: 163184
- 11 - WORK ORDER ID#: 163185
- 12 - WORK ORDER ID#: 163186
- 13 - WORK ORDER ID#: 163188

Action Taken:		Date:	Initial/Stamp:		
LIQUID PENETRANT INSPECTION CARRIED OUT ON ITEMS LISTED ABOVE (ITEMS 1-13) AS PER ASTM1417M-13		JUL 25 2017	DOT-APP 61 53-89		
NO CRACK FOUND					
Pen: ZL-27A MWO5678 DEV: SKD-S2 MPO11715 CLEANER: SKC-S MPO13923					
Description	Location P/N	Qty	Batch	S/N Off	S/N On

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp DOT-APP 61 53-89	Date:
Name: ANTONINO MARCHETTA		JUL 25 2017



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO37211**

Purchase Order Date 7/25/2017

PO Print Date 7/25/2017

Page Number 1 of 5

Order From :
SKYSERVICE
6120 MIDFIELD ROAD
MISSISSAUGA, ONTARIO L5P 1B1
CANADA

VC-SKY001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 905-678-5636

Ship To Contact
Ship To Phone
Ship Via: Delivered
Ship Acct:

Buyer Diane Baker
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
2	161645 ✓ LPI PER QSI038 4.1	D350-748-201	7/25/2017 Yes 7/25/2017		1.00	\$300.00	\$300.00
						Line Total:	\$300.00
3	161647 ✓ LPI PER QSI038 4.1	D350-748-201	7/25/2017 Yes 7/25/2017		1.00	\$300.00	\$300.00
						Line Total:	\$300.00
4	163658 ✓ LPI PER QSI038 4.1	D350-748-201	7/25/2017 Yes 7/25/2017		1.00	\$300.00	\$300.00

Note:

7/25/2017



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

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					Line Total:	\$300.00
5	163661 ✓	D350-748-201	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00
LPI PER QS1038 4.1						
					Line Total:	\$300.00
6	163662 /	D350-748-201	7/25/2017 Yes 7/25/2017	0.00	\$300.00	\$0.00
LPI PER QS1038 4.1						
					Line Total:	\$0.00
7	163180 /	D350-748-201	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00
LPI PER QS1038 4.1						
					Line Total:	\$300.00

Note:

7/25/2017



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CANADA

VC-SKY001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 905-678-5636

Ship To Contact

Ship To Phone

Ship Via: Delivered

Ship Acct:

Buyer

Diane Baker

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

8	163182	D350-748-201	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00
LPI PER QSI038 4.1						
						Line Total:
						\$300.00
9	163665	D350-748-101	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00
LPI PER QSI038 4.1						
						Line Total:
						\$300.00
10	163183	D350-748-101	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00
LPI PER QSI038 4.1						
						Line Total:
						\$300.00

Note:

7/25/2017



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VC-SKY001

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MISSISSAUGA, ONTARIO L5P 1B1
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

905-678-5636

Ship To Contact

Ship To Phone

Ship Via:

Delivered

Ship Acct:

Buyer

Diane Baker

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

11	163184		D350-748-101	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00	
LPI PER QSI038 4.1								
							Line Total:	\$300.00
12	163185		D350-748-101	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00	
LPI PER QSI038 4.1								
							Line Total:	\$300.00
13	163186		D350-748-101	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00	
LPI PER QSI038 4.1								
							Line Total:	\$300.00

Note:

7/25/2017



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CANADA

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Ship To Phone

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Ship Acct:

Buyer Diane Baker
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

14	163188	D350-748-101	7/25/2017 Yes 7/25/2017	1.00	\$300.00	\$300.00
LPI PER QSI038 4.1						

Line Total: \$300.00

15	71401-45	procurement quality clauses	7/25/2017 No 7/25/2017	1.00	\$0.00	\$0.00
Procurement Quality Clauses A005 right of entry A012 chemical and physical test report A016 personnel qualification A017 raw material identification (as applicable) A024 process certifications A026 certification of material conformance A041 quality management system A042 dart notification by supplier A043 retention of quality documents						

Line Total: \$0.00

PO Total: \$3,600.00

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 4

Change Date: 7/25/2017